



### Disclosure to Promote the Right To Information

Whereas the Parliament of India has set out to provide a practical regime of right to information for citizens to secure access to information under the control of public authorities, in order to promote transparency and accountability in the working of every public authority, and whereas the attached publication of the Bureau of Indian Standards is of particular interest to the public, particularly disadvantaged communities and those engaged in the pursuit of education and knowledge, the attached public safety standard is made available to promote the timely dissemination of this information in an accurate manner to the public.

“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 12098 (1987): Rim wheels for pneumatic tyres for animal drawn vehicles [TED 7: Automotive Tyres, Tubes and Rims]

“ज्ञान से एक नये भारत का निर्माण”

Satyanaaranay Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartṛhari—Nītiśatakam

“Knowledge is such a treasure which cannot be stolen”





BLANK PAGE



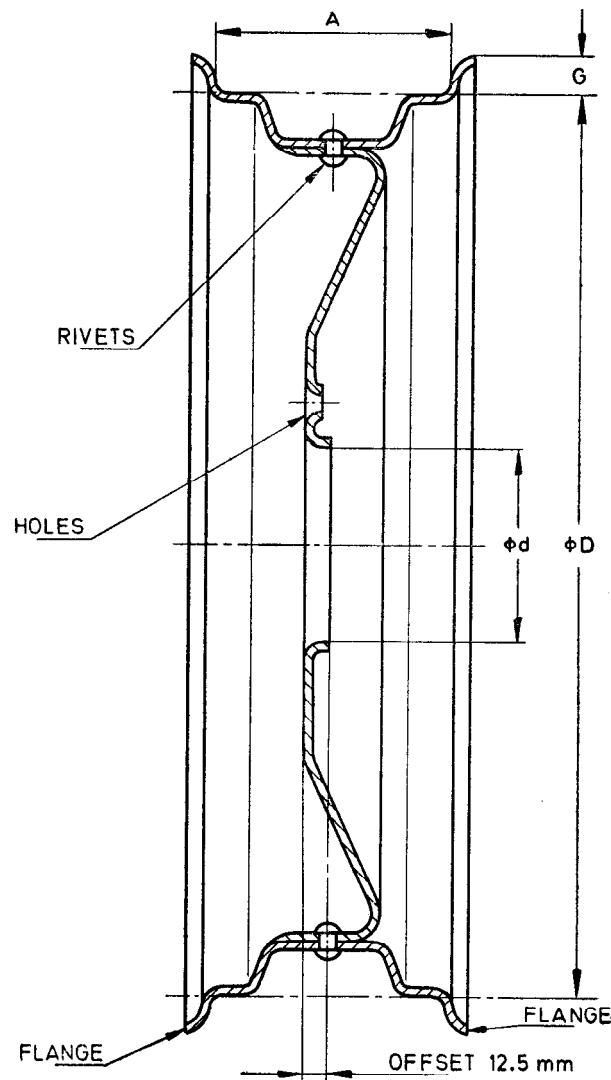
PROTECTED BY COPYRIGHT

Indian Standard

**SPECIFICATION FOR  
RIM WHEELS FOR PNEUMATIC  
TYRES FOR ANIMAL DRAWN  
VEHICLES**

**1. Scope** — Specifies requirements for rim wheels suitable for use with pneumatic tyres on animal drawn vehicle.

**2. Nomenclature** — Shall be as given in Fig. 1.



$A$  = Specified rim width

$G$  = Rim flange height

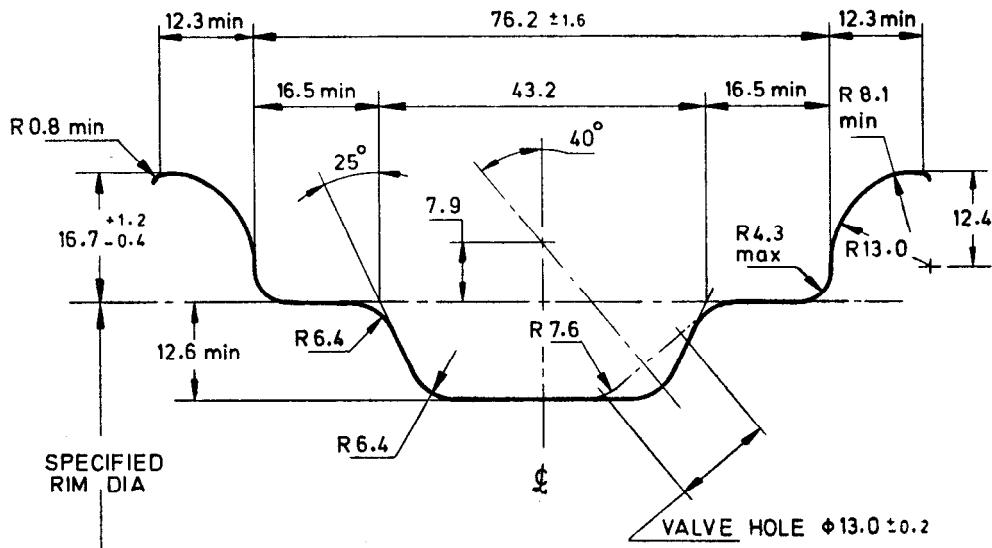
$D$  = Specified rim diameter  
(see Fig. 2, 3 and 4)

$d$  = Specified hub bore

FIG. 1 NOMENCLATURE OF ADV RIM WHEELS

**3. Type** The rim wheels shall be made of two parts, a rim of the drop centre type affixed to a central disc to fit on the hub.

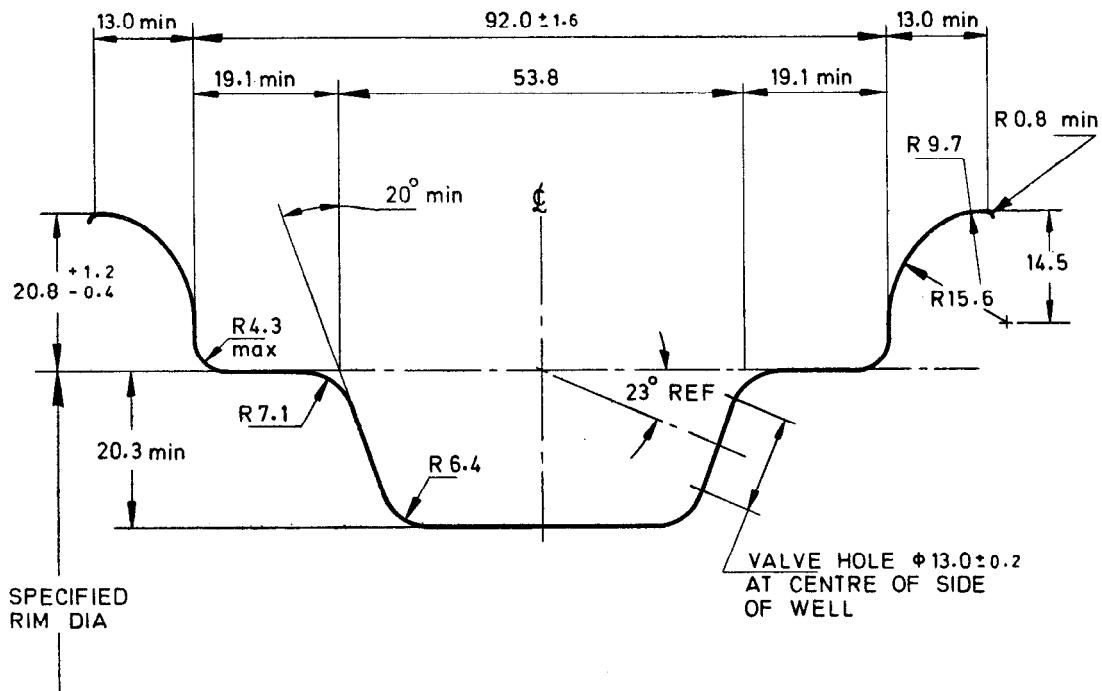
## 4. Rim Profile — Shall conform to the Fig. 2, 3 or 4 as applicable.



All dimensions in millimetres.  
DIAMETERS AND CIRCUMFERENCES

Nominal Rim Dia	Specified Rim Dia	Taping Dia	Taping Circumference +0.0 -2.4
19	484.2	484.2	1521.2

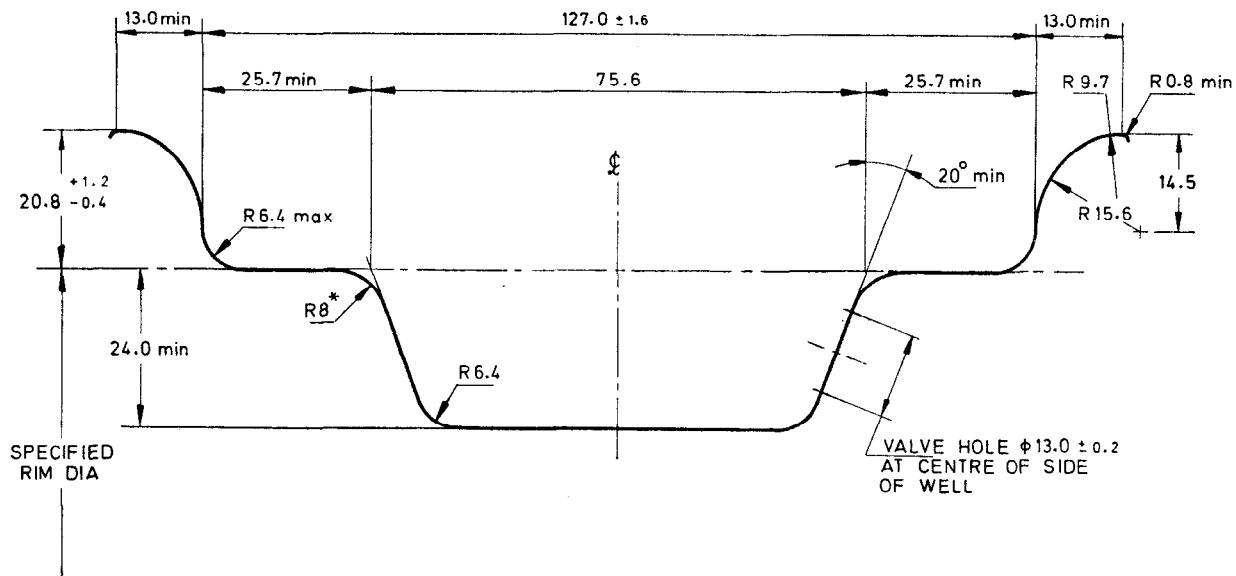
FIG. 2 RIM CONTOUR 3.00 WELL BASE FOR ANIMAL DRAWN VEHICLES (ADV)



All dimensions in millimetres.  
DIAMETERS AND CIRCUMFERENCES

Nominal Rim Dia Code	Specified Rim Dia	Taping Dia	Taping Circumference +0.0 -2.4
19	484.2	484.2	1521.2
20	509.6	509.6	1550.2

FIG. 3 RIM CONTOUR 3.62 WELL BASE FOR ANIMAL DRAWN VEHICLES (ADV)



All dimensions in millimetres.

#### DIAMETERS AND CIRCUMFERENCES

Nominal Rim Dia Code	Specified Rim Dia	Taping Dia	Taping Circumference +0.0 -2.4
19	484.2	484.2	1521.2

\*For heavy duty ( HD ) type rim, a radius  $10R$  is permitted without any change to the rim bead seat width 25.7 mm minimum.

FIG. 4 RIM CONTOUR 5'00 WELL-BASE FOR ANIMAL DRAWN VEHICLES ( ADV )

**5. Designation** — The size designation of rim shall include figures and alphabets representing the following in the order given:

- Nominal rim width code,
- Rim profile type, and
- Nominal rim diameter code.

*Example:*

5'00 × 19 DC ( also called 'WB', well base type )

**6. Material** — The rims shall be manufactured from steel conforming to grade ST 34 of IS : 1079-1973 'Specification for hot rolled carbon steel sheet and strip ( third revision )'.

**7. Recommended Rim-Tyre Combinations** — The rims shall be selected according to load carrying capacity suiting to tyres and recommended combinations may be as follows:

Rim Size Designation	Recommended Tyre Size Designation
3'00 × 19	5'00 — 19
3'62 × 19	6'00 — 19
5'00 × 19	7'00 — 19
	8'00 — 19
3'62 × 20	6'00 — 20

#### 8. Dimensions

**8.1** As agreed to between the manufacturer and the purchaser, the outer rim shall be made from skelp having any of the thickness of 3.15, 3.5, 4 or 5 mm and the central disc shall be made from 5 mm thick plate.

**8.2** Hub portion of the disc shall have 5 holes each of 17 mm diameter, equally spaced on 165 mm pitch circle diameter. It shall have a bore of 109 mm. It shall conform to the requirements of IS : 4930-1968 'Guide for axle assembly for animal drawn vehicles'.

**8.3** Off-set shall be made in the disc to suit the cart track that is central plate face line shall have a displacement of 12.5 mm towards inner side than the centre line of the outer rim.

**8.4** A valve hole of 13.0 mm ( $\pm 0.2$ ) diameter shall be punched at the centre of one side of the rim well and located at the outer side of the rim-wheel. Valve hole shall be free from burrs.

**8.5** Lift, which is the difference between the high and low point measured at any location on each tyre seat, when truly mounted and revolved, shall not exceed 4 mm.

**8.6** Wobble, which is the lateral variation measured on the vertical inside face of the flange, shall not exceed 4 mm.

## **9. Rim Contour and Other Requirements**

**9.1** The outer rim portion shall be press-fitted with the central disc and riveted with 12 rivets of 6.5 mm or 8 rivets of 9.5 mm diameter equally spaced on the periphery.

**9.2** Rim contour shall conform to Fig. 2, 3 or 4 as applicable, to suit the different sizes of tyres of the recommended nominal size designations.

**9.2.1** Starting with the highest point of the flange of rims, the shaping of the flange contour towards the outer part of the rim is left to the manufacturer, but any increase in width of the rim flanges above the minimum width shall be located lower than the highest point of the flange in order to facilitate tyre mounting. The edge of the flange shall be rounded off.

## **10. Finish**

**10.1** The rim shall have a smooth finish. It shall be painted with suitable synthetic enamel paint after proper phosphating and with an under coating of the metal primer.

## **11. Marking**

**11.1** The rim/wheel shall be durably and legibly marked with the following:

- a) Manufacturer's name or recognized trade-mark,
- b) Rim size designation,
- c) Manufacturer's code, and
- d) Country of origin ( optional ).

**11.2** *Certification Marking* — Details available with the Bureau of Indian Standards.

## **EXPLANATORY NOTE**

Though with the development of technology fast moving vehicles are replacing animal drawn vehicles ( ADV ), the latter still finds its utility particularly in rural areas.

This Indian Standard has been prepared in order to provide interchangeability in ADV rim/wheels in a size regardless of 'make' or brand.